

ABSTRACT OF THE DISCLOSURE

A semiconductor device and its method of fabrication are provided. The semiconductor device includes a substrate, a patterning stop region, an insulating overlayer, a container region within the insulating overlayer, a charge storage lamina or conductive layer over an interior surface of the container region; a contact region defined by the charge storage lamina or conductive layer; and an electrical contact in the contact region, wherein respective portions of the electrical contact and the charge storage lamina or conductive layer occupy collectively substantially all of the container region. A bit line terminal is coupled to the charge storage lamina through a switching structure. According to one embodiment of the present invention, a central patterning stop region and a pair of lateral patterning stop regions are provided such that the container region defines a container cross section having an upper container portion and a lower container portion, wherein the lower container portion is positioned between the lateral stop regions, and wherein the upper container portion is wider than the lower container portion.